

## **ABSTRACT**

A probe apparatus having probe groups comprising two or three probes that independently contact single terminals of tested chips. As a result, the probe apparatus is capable of recognizing voltage drops of a test signal applied prior to the chip testing onto a test path along two or three probes contacting, the terminal and the interfaces between them. The test path does not pass through the chip. An electronic circuit measures the voltage drops and compensated accordingly operational signals passing through the terminals, the probes and the interfaces during the chip testing. A first embodiment comprises two probes per group. A second embodiment comprises three probes per group. In the second embodiment, the variable resistance component of three resistance measurements of first/second, first/third and second/third resistance paths are compared by the electronic circuit, in order to determine absolute resistance values for each of the three signal paths. Consequently, in the second embodiment, the voltage drops may be individually adjusted for each of the three operational signal paths.